



PCT09

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/09/830,837

TIME: 10:05:13

Input Set : A:\EP.txt

Output Set: N:\CRF3\02132002\I830837.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: Institut de Recherches Cliniques de Montreal
 4 SEIDAH, Nabil
 5 CHRETIEN, Michel
 6 MARCINKIEWICZ, Mieczyslaw
 7 LAAKSONEN, Reijo
 8 DAVIGNON, Jean
 10 <120> TITLE OF INVENTION: MAMMALIAN SUBTILISIN/KEXIN ISOZYME SKI-1: A PROPROTEIN
 11 CONVERTASE WITH A UNIQUE CLEAVAGE SPECIFICITY
 13 <130> FILE REFERENCE: IRCM
 15 <140> CURRENT APPLICATION NUMBER: US/09/830,837
 16 <141> CURRENT FILING DATE: 2001-10-18
 18 <150> PRIOR APPLICATION NUMBER: CA 2,249,648
 19 <151> PRIOR FILING DATE: 1998-11-04
 21 <160> NUMBER OF SEQ ID NOS: 76
 23 <170> SOFTWARE: PatentIn Ver. 2.1

ERRORED SEQUENCES

326 <210> SEQ ID NO: 2
 327 <211> LENGTH: 1052
 328 <212> TYPE: PRT
 329 <213> ORGANISM: Rattus sp.
 331 <400> SEQUENCE: 2
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 333 1 5 10 15
 335 Gly Lys Lys His Leu Gly Asp Arg Leu Gly Lys Lys Ala Phe Glu Lys
 336 20 25 30
 338 Ala Pro Cys Pro Ser Cys Ser His Leu Thr Leu Lys Val Glu Phe Ser
 339 35 40 45
 341 Ser Thr Val Val Glu Tyr Glu Tyr Ile Val Ala Phe Asn Gly Tyr Phe
 342 50 55 60
 344 Thr Ala Lys Ala Arg Asn Ser Phe Ile Ser Ser Ala Leu Lys Ser Ser
 345 65 70 75 80
 347 Glu Val Asp Asn Trp Arg Ile Ile Pro Arg Asn Asn Pro Ser Ser Asp
 348 85 90 95
 350 Tyr Pro Ser Asp Phe Glu Val Ile Gln Ile Lys Glu Lys Gln Lys Ala
 351 100 105 110
 353 Gly Leu Leu Thr Leu Glu Asp His Pro Asn Ile Lys Arg Val Thr Pro
 354 115 120 125
 356 Gln Arg Lys Val Phe Arg Ser Leu Lys Phe Ala Glu Ser Asp Pro Ile
 357 130 135 140
 359 Val Pro Cys Asn Glu Thr Arg Trp Ser Gln Lys Trp Gln Ser Ser Arg

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360 145          150          155          160
362 Pro Leu Lys Arg Ala Ser Leu Ser Leu Gly Ser Gly Phe Trp His Ala
363          165          170          175
365 Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln
366          180          185          190
368 Val Ala Gln Thr Leu Gln Ala Asp Val Leu Trp Gln Met Gly Tyr Thr
369          195          200          205
371 Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu Lys
372          210          215          220
374 His Pro His Phe Lys Asn Val Lys Glu Arg Thr Asn Trp Thr Asn Glu
375 225          230          235          240
377 Arg Thr Leu Asp Asp Gly Leu Gly His Gly Thr Phe Val Ala Gly Val
378          245          250          255
380 Ile Ala Ser Met Arg Glu Cys Gln Gly Phe Ala Pro Asp Ala Glu Leu
381          260          265          270
383 His Ile Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp
384          275          280          285
386 Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu Lys Lys Met Asp Val Leu
387          290          295          300
389 Asn Leu Ser Ile Gly Gly Pro Asp Phe Met Asp His Pro Phe Val Asp
390 305          310          315          320
392 Lys Val Trp Glu Leu Thr Ala Asn Asn Val Ile Met Val Ser Ala Ile
393          325          330          335
395 Gly Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro Ala Asp Gln
396          340          345          350
398 Met Asp Val Ile Gly Val Gly Gly Ile Asp Phe Glu Asp Asn Ile Ala
399          355          360          365
401 Arg Phe Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Gly Gly Tyr
402          370          375          380
404 Gly Arg Val Lys Pro Asp Ile Val Thr Tyr Gly Ala Gly Val Arg Gly
405 385          390          395          400
407 Ser Gly Val Lys Gly Gly Cys Arg Ala Leu Ser Gly Thr Ser Val Ala
408          405          410          415
410 Ser Pro Val Val Ala Gly Ala Val Thr Leu Leu Val Ser Thr Val Gln
411          420          425          430
413 Lys Arg Glu Leu Val Asn Pro Ala Ser Val Lys Gln Ala Leu Ile Ala
414          435          440          445
416 Ser Ala Arg Arg Leu Pro Gly Val Asn Met Phe Glu Gln Gly His Gly
417          450          455          460
419 Lys Leu Asp Leu Leu Arg Ala Tyr Gln Ile Leu Ser Ser Tyr Lys Pro
420 465          470          475          480
422 Gln Ala Ser Leu Ser Pro Ser Tyr Ile Asp Leu Thr Glu Cys Pro Tyr
423          485          490          495
425 Met Trp Pro Tyr Cys Ser Gln Pro Ile Tyr Tyr Gly Gly Met Pro Thr
426          500          505          510
428 Ile Val Asn Val Thr Ile Leu Asn Gly Met Gly Val Thr Gly Arg Ile
429          515          520          525
431 Val Asp Lys Pro Glu Trp Arg Pro Tyr Leu Pro Gln Asn Gly Asp Asn
432          530          535          540

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434 Ile Glu Val Ala Phe Ser Tyr Ser Ser Val Leu Trp Pro Trp Ser Gly
435 545 550 555 560
437 Tyr Leu Ala Ile Ser Ile Ser Val Thr Lys Lys Ala Ala Ser Trp Glu
438 565 570 575
440 Gly Ile Ala Gln Gly His Ile Met Ile Thr Val Ala Ser Pro Ala Glu
441 580 585 590
443 Thr Glu Leu Lys Asn Gly Ala Glu His Thr Ser Thr Val Lys Leu Pro
444 595 600 605
446 Ile Lys Val Lys Ile Ile Pro Thr Pro Pro Arg Ser Lys Arg Val Leu
447 610 615 620
449 Trp Asp Gln Tyr His Asn Leu Arg Tyr Pro Pro Gly Tyr Phe Pro Arg
450 625 630 635 640
452 Asp Asn Leu Arg Met Lys Asn Asp Pro Leu Asp Trp Asn Gly Asp His
453 645 650 655
455 Val His Thr Asn Phe Arg Asp Met Tyr Gln His Leu Arg Ser Met Gly
456 660 665 670
458 Tyr Phe Val Glu Val Leu Gly Ala Pro Phe Thr Cys Phe Asp Ala Thr
459 675 680 685
461 Gln Tyr Gly Thr Leu Leu Met Val Asp Ser Glu Glu Glu Tyr Phe Pro
462 690 695 700
464 Glu Glu Ile Ala Lys Leu Arg Arg Asp Val Asp Asn Gly Leu Ser Leu
465 705 710 715 720
467 Val Val Phe Ser Asp Trp Tyr Asn Thr Ser Val Met Arg Lys Val Lys
468 725 730 735
470 Phe Tyr Asp Glu Asn Thr Arg Gln Trp Trp Met Pro Asp Thr Gly Gly
471 740 745 750
473 Ala Asn Val Pro Ala Leu Asn Glu Leu Leu Ser Val Trp Asn Met Gly
474 755 760 765
476 Phe Ser Asp Gly Leu Tyr Glu Gly Glu Phe Ala Leu Ala Asn His Asp
477 770 775 780
479 Met Tyr Tyr Ala Ser Gly Cys Ser Ile Ala Arg Phe Pro Glu Asp Gly
480 785 790 795 800
482 Val Val Ile Thr Gln Thr Phe Lys Asp Gln Gly Leu Glu Val Leu Lys
483 805 810 815
485 Gln Glu Thr Ala Val Val Asp Asn Val Pro Ile Leu Gly Leu Tyr Gln
486 820 825 830
488 Ile Pro Ala Glu Gly Gly Gly Arg Ile Val Leu Tyr Gly Asp Ser Asn
489 835 840 845
491 Cys Leu Asp Asp Ser His Arg Gln Lys Asp Cys Phe Trp Leu Leu Asp
492 850 855 860
494 Ala Leu Leu Gln Tyr Thr Ser Tyr Gly Val Thr Pro Pro Ser Leu Ser
495 865 870 875 880
497 His Ser Gly Asn Arg Gln Arg Pro Pro Ser Gly Ala Gly Leu Ala Pro
498 885 890 895
500 Pro Glu Arg Met Glu Gly Asn His Leu His Arg Tyr Ser Lys Val Leu
501 900 905 910
503 Glu Ala His Leu Gly Asp Pro Lys Pro Arg Pro Leu Pro Ala Cys Pro
504 915 920 925
506 His Leu Ser Trp Ala Lys Pro Gln Pro Leu Asn Glu Thr Ala Pro Ser

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507      930      935      940
509 Asn Leu Trp Lys His Gln Lys Leu Leu Ser Ile Asp Leu Asp Lys Val
510 945      950      955      960
512 Val Leu Pro Asn Phe Arg Ser Asn Arg Pro Gln Val Arg Pro Leu Ser
513      965      970      975
515 Pro Gly Glu Ser Gly Ala Trp Asp Ile Pro Gly Gly Ile Met Pro Gly
516      980      985      990
518 Arg Tyr Asn Gln Glu Val Gly Gln Thr Ile Pro Val Phe Ala Phe Leu
519      995      1000      1005
521 Gly Ala Met Val Ala Leu Ala Phe Phe Val Val Gln Ile Ser Lys Ala
522 1010      1015      1020
524 Lys Ser Arg Pro Lys Arg Arg Arg Pro Arg Ala Lys Arg Pro Gln Leu
E--> 525 025/1025      1030      1035      1040
527 Ala Gln Gln Ala His Pro Ala Arg Thr Pro Ser Val
528      1045      1050
829 <210> SEQ ID NO: 4
830 <211> LENGTH: 1052
831 <212> TYPE: PRT
832 <213> ORGANISM: Mus sp. p.7
834 <400> SEQUENCE: 4
835 Met Lys Leu Val Ser Thr Trp Leu Leu Val Leu Val Val Leu Leu Cys
836 1      5      10      15
838 Gly Lys Arg His Leu Gly Asp Arg Leu Gly Thr Arg Ala Leu Glu Lys
839      20      25      30
841 Ala Pro Cys Pro Ser Cys Ser His Leu Thr Leu Lys Val Glu Phe Ser
842      35      40      45
844 Ser Thr Val Val Glu Tyr Glu Tyr Ile Val Ala Phe Asn Gly Tyr Phe
845      50      55      60
847 Thr Ala Lys Ala Arg Asn Ser Phe Ile Ser Ser Ala Leu Lys Ser Ser
848 65      70      75      80
850 Glu Val Glu Asn Trp Arg Ile Ile Pro Arg Asn Asn Pro Ser Ser Asp
851      85      90      95
853 Tyr Pro Ser Asp Phe Glu Val Ile Gln Ile Lys Glu Lys Gln Lys Ala
854      100      105      110
856 Gly Leu Leu Thr Leu Glu Asp His Pro Asn Ile Lys Arg Val Thr Pro
857      115      120      125
859 Gln Arg Lys Val Phe Arg Ser Leu Lys Phe Ala Glu Ser Asn Pro Ile
860      130      135      140
862 Val Pro Cys Asn Glu Thr Arg Trp Ser Gln Lys Trp Gln Ser Ser Arg
863 145      150      155      160
865 Pro Leu Lys Arg Ala Ser Leu Ser Leu Gly Ser Gly Phe Trp His Ala
866      165      170      175
868 Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln
869      180      185      190
871 Val Ala Gln Thr Leu Gln Ala Asp Val Leu Trp Gln Met Gly Tyr Thr
872      195      200      205
874 Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu Lys
875      210      215      220
877 His Pro His Phe Lys Asn Val Lys Glu Arg Thr Asn Trp Thr Asn Glu

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878 225                230                235                240
880 Arg Thr Leu Asp Asp Gly Leu Gly His Gly Thr Phe Val Ala Gly Val
881                245                250                255
883 Ile Ala Ser Met Arg Glu Cys Gln Gly Phe Ala Pro Asp Ala Glu Leu
884                260                265                270
886 His Ile Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp
887                275                280                285
889 Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu Lys Lys Met Asp Val Leu
890                290                295                300
892 Asn Leu Ser Ile Gly Gly Pro Asp Phe Met Asp His Pro Phe Val Asp
893 305                310                315                320
895 Lys Val Trp Glu Leu Thr Ala Asn Asn Val Ile Met Val Ser Ala Ile
896                325                330                335
898 Gly Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro Ala Asp Gln
899                340                345                350
901 Met Asp Val Ile Gly Val Gly Gly Ile Asp Phe Glu Asp Asn Ile Ala
902                355                360                365
904 Arg Phe Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Gly Gly Tyr
905                370                375                380
907 Gly Arg Val Lys Pro Asp Ile Val Thr Tyr Gly Ala Gly Val Arg Gly
908 385                390                395                400
910 Ser Gly Val Lys Gly Gly Cys Arg Ala Leu Ser Gly Thr Ser Val Ala
911                405                410                415
913 Ser Pro Val Val Ala Gly Ala Val Thr Leu Leu Val Ser Thr Val Gln
914                420                425                430
916 Lys Arg Glu Leu Val Asn Pro Ala Ser Val Lys Gln Ala Leu Ile Ala
917                435                440                445
919 Ser Ala Arg Arg Leu Pro Gly Val Asn Met Phe Glu Gln Gly His Gly
920                450                455                460
922 Lys Leu Asp Leu Leu Arg Ala Tyr Gln Ile Leu Ser Ser Tyr Lys Pro
923 465                470                475                480
925 Gln Ala Ser Leu Ser Pro Ser Tyr Ile Asp Leu Thr Glu Cys Pro Tyr
926                485                490                495
928 Met Trp Pro Tyr Cys Ser Gln Pro Ile Tyr Tyr Gly Gly Met Pro Thr
929                500                505                510
931 Ile Val Asn Val Thr Ile Leu Asn Gly Met Gly Val Thr Gly Arg Ile
932                515                520                525
934 Val Asp Lys Pro Glu Trp Arg Pro Tyr Leu Pro Gln Asn Gly Asp Asn
935                530                535                540
937 Ile Glu Val Ala Phe Ser Tyr Ser Ser Val Leu Trp Pro Trp Ser Gly
938 545                550                555                560
940 Tyr Leu Ala Ile Ser Ile Ser Val Thr Lys Lys Ala Ala Ser Trp Glu
941                565                570                575
943 Gly Ile Ala Gln Gly His Ile Met Ile Thr Val Ala Ser Pro Ala Glu
944                580                585                590
946 Thr Glu Leu His Ser Gly Ala Glu His Thr Ser Thr Val Lys Leu Pro
947                595                600                605
949 Ile Lys Val Lys Ile Ile Pro Thr Pro Pro Arg Ser Lys Arg Val Leu
950                610                615                620

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952 Trp Asp Gln Tyr His Asn Leu Arg Tyr Pro Pro Gly Tyr Phe Pro Arg
953 625                               630                               635                               640
955 Asp Asn Leu Arg Met Lys Asn Asp Pro Leu Asp Trp Asn Gly Asp His
956                               645                               650                               655
958 Val His Thr Asn Phe Arg Asp Met Tyr Gln His Leu Arg Ser Met Gly
959                               660                               665                               670
961 Tyr Phe Val Glu Val Leu Gly Ala Pro Phe Thr Cys Phe Asp Ala Thr
962                               675                               680                               685
964 Gln Tyr Gly Thr Leu Leu Leu Val Asp Ser Glu Glu Glu Tyr Phe Pro
965                               690                               695                               700
967 Glu Glu Ile Ala Lys Leu Arg Arg Asp Val Asp Asn Gly Leu Ser Leu
968 705                               710                               715                               720
970 Val Ile Phe Ser Asp Trp Tyr Asn Thr Ser Val Met Arg Lys Val Lys
971                               725                               730                               735
973 Phe Tyr Asp Glu Asn Thr Arg Gln Trp Trp Met Pro Asp Thr Gly Gly
974                               740                               745                               750
976 Ala Asn Ile Pro Ala Leu Asn Glu Leu Leu Ser Val Trp Asn Met Gly
977                               755                               760                               765
979 Phe Ser Asp Gly Leu Tyr Glu Gly Glu Phe Val Leu Ala Asn His Asp
980                               770                               775                               780
982 Met Tyr Tyr Ala Ser Gly Cys Ser Ile Ala Lys Phe Pro Glu Asp Gly
983 785                               790                               795                               800
985 Val Val Ile Thr Gln Thr Phe Lys Asp Gln Gly Leu Glu Val Leu Lys
986                               805                               810                               815
988 Gln Glu Thr Ala Val Val Glu Asn Val Pro Ile Leu Gly Leu Tyr Gln
989                               820                               825                               830
991 Ile Pro Ser Glu Gly Gly Gly Arg Ile Val Leu Tyr Gly Asp Ser Asn
992                               835                               840                               845
994 Cys Leu Asp Asp Ser His Arg Gln Lys Asp Cys Phe Trp Leu Leu Asp
995                               850                               855                               860
997 Ala Leu Leu Gln Tyr Thr Ser Tyr Gly Val Thr Pro Pro Ser Leu Ser
998 865                               870                               875                               880
1000 His Ser Gly Asn Arg Gln Arg Pro Pro Ser Gly Ala Gly Leu Ala Pro
1001                               885                               890                               895
1003 Pro Glu Arg Met Glu Gly Asn His Leu His Arg Tyr Ser Lys Val Leu
1004                               900                               905                               910
1006 Glu Ala His Leu Gly Asp Pro Lys Pro Arg Pro Leu Pro Ala Cys Pro
1007                               915                               920                               925
1009 His Leu Ser Trp Ala Lys Pro Gln Pro Leu Asn Glu Thr Ala Pro Ser
1010                               930                               935                               940
1012 Asn Leu Trp Lys His Gln Lys Leu Leu Ser Ile Asp Leu Asp Lys Val
1013 945                               950                               955                               960
1015 Val Leu Pro Asn Phe Arg Ser Asn Arg Pro Gln Val Arg Pro Leu Ser
1016                               965                               970                               975
1018 Pro Gly Glu Ser Gly Ala Trp Asp Ile Pro Gly Gly Ile Met Pro Gly
1019                               980                               985                               990
1021 Arg Tyr Asn Gln Glu Val Gly Gln Thr Ile Pro Val Phe Ala Phe Leu
1022                               995                               1000                               1005
1024 Gly Ala Met Val Ala Leu Ala Phe Phe Val Val Gln Ile Ser Lys Ala

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1025 1010 1015 1020
 1027 Lys Ser Arg Pro Lys Arg Arg Pro Arg Ala Lys Arg Pro Gln Leu
 E--> 1028 025/025 1030 1035 1040
 1030 Ala Gln Gln Ala His Pro Ala Arg Thr Pro Ser Val
 1031 1045 1050
 1350 <210> SEQ ID NO: 6
 1351 <211> LENGTH: 1052
 1352 <212> TYPE: PRT
 1353 <213> ORGANISM: Homo sapiens *p9*
 1355 <400> SEQUENCE: 6
 1356 Met Lys Leu Val Asn Ile Trp Leu Leu Leu Val Val Leu Leu Cys
 1357 1 5 10 15
 1359 Gly Lys Lys His Leu Gly Asp Arg Leu Glu Lys Lys Ser Phe Glu Lys
 1360 20 25 30
 1362 Ala Pro Cys Pro Gly Cys Ser His Leu Thr Leu Lys Val Glu Phe Ser
 1363 35 40 45
 1365 Ser Thr Val Val Glu Tyr Glu Tyr Ile Val Ala Phe Asn Gly Tyr Phe
 1366 50 55 60
 1368 Thr Ala Lys Ala Arg Asn Ser Phe Ile Ser Ser Ala Leu Lys Ser Ser
 1369 65 70 75 80
 1371 Glu Val Asp Asn Trp Arg Ile Ile Pro Arg Asn Asn Pro Ser Ser Asp
 1372 85 90 95
 1374 Tyr Pro Ser Asp Phe Glu Val Ile Gln Ile Lys Glu Lys Gln Lys Ala
 1375 100 105 110
 1377 Gly Leu Leu Thr Leu Glu Asp His Pro Asn Ile Lys Arg Val Thr Pro
 1378 115 120 125
 1380 Gln Arg Lys Val Phe Arg Ser Leu Lys Tyr Ala Glu Ser Asp Pro Thr
 1381 130 135 140
 1383 Val Pro Cys Asn Glu Thr Arg Trp Ser Gln Lys Trp Gln Ser Ser Arg
 1384 145 150 155 160
 1386 Pro Leu Arg Arg Ala Ser Leu Ser Leu Gly Ser Gly Phe Trp His Ala
 1387 165 170 175
 1389 Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln
 1390 180 185 190
 1392 Val Ala Gln Thr Leu Gln Ala Asp Val Leu Trp Gln Met Gly Tyr Thr
 1393 195 200 205
 1395 Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu Lys
 1396 210 215 220
 1398 His Pro His Phe Lys Asn Val Lys Glu Arg Thr Asn Trp Thr Asn Glu
 1399 225 230 235 240
 1401 Arg Thr Leu Asp Asp Gly Leu Gly His Gly Thr Phe Val Ala Gly Val
 1402 245 250 255
 1404 Ile Ala Ser Met Arg Glu Cys Gln Gly Phe Ala Pro Asp Ala Glu Leu
 1405 260 265 270
 1407 His Ile Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp
 1408 275 280 285
 1410 Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu Lys Lys Ile Asp Val Leu
 1411 290 295 300
 1413 Asn Leu Ser Ile Gly Gly Pro Asp Phe Met Asp His Pro Phe Val Asp

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1414 305          310          315          320
1416 Lys Val Trp Glu Leu Thr Ala Asn Asn Val Ile Met Val Ser Ala Ile
1417          325          330          335
1419 Gly Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro Ala Asp Gln
1420          340          345          350
1422 Met Asp Val Ile Gly Val Gly Gly Ile Asp Phe Glu Asp Asn Ile Ala
1423          355          360          365
1425 Arg Phe Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Gly Gly Tyr
1426          370          375          380
1428 Gly Arg Met Lys Pro Asp Ile Val Thr Tyr Gly Ala Gly Val Arg Gly
1429 385          390          395          400
1431 Ser Gly Val Lys Gly Gly Cys Arg Ala Leu Ser Gly Thr Ser Val Ala
1432          405          410          415
1434 Ser Pro Val Val Ala Gly Ala Val Thr Leu Leu Val Ser Thr Val Gln
1435          420          425          430
1437 Lys Arg Glu Leu Val Asn Pro Ala Ser Met Lys Gln Ala Leu Ile Ala
1438          435          440          445
1440 Ser Ala Arg Arg Leu Pro Gly Val Asn Met Phe Glu Gln Gly His Gly
1441          450          455          460
1443 Lys Leu Asp Leu Leu Arg Ala Tyr Gln Ile Leu Asn Ser Tyr Lys Pro
1444 465          470          475          480
1446 Gln Ala Ser Leu Ser Pro Ser Tyr Ile Asp Leu Thr Glu Cys Pro Tyr
1447          485          490          495
1449 Met Trp Pro Tyr Cys Ser Gln Pro Ile Tyr Tyr Gly Gly Met Pro Thr
1450          500          505          510
1452 Val Val Asn Val Thr Ile Leu Asn Gly Met Gly Val Thr Gly Arg Ile
1453          515          520          525
1455 Val Asp Lys Pro Asp Trp Gln Pro Tyr Leu Pro Gln Asn Gly Asp Asn
1456          530          535          540
1458 Ile Glu Val Ala Phe Ser Tyr Ser Ser Val Leu Trp Pro Trp Ser Gly
1459 545          550          555          560
1461 Tyr Leu Ala Ile Ser Ile Ser Val Thr Lys Lys Ala Ala Ser Trp Glu
1462          565          570          575
1464 Gly Ile Ala Gln Gly His Val Met Ile Thr Val Ala Ser Pro Ala Glu
1465          580          585          590
1467 Thr Glu Ser Lys Asn Gly Ala Glu Gln Thr Ser Thr Val Lys Leu Pro
1468          595          600          605
1470 Ile Lys Val Lys Ile Ile Pro Thr Pro Pro Arg Ser Lys Arg Val Leu
1471          610          615          620
1473 Trp Asp Gln Tyr His Asn Leu Arg Tyr Pro Pro Gly Tyr Phe Pro Arg
1474 625          630          635          640
1476 Asp Asn Leu Arg Met Lys Asn Asp Pro Leu Asp Trp Asn Gly Asp His
1477          645          650          655
1479 Ile His Thr Asn Phe Arg Asp Met Tyr Gln His Leu Arg Ser Met Gly
1480          660          665          670
1482 Tyr Phe Val Glu Val Leu Gly Ala Pro Phe Thr Cys Phe Asp Ala Ser
1483          675          680          685
1485 Gln Tyr Gly Thr Leu Leu Met Val Asp Ser Glu Glu Glu Tyr Phe Pro
1486          690          695          700

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```

1488 Glu Glu Ile Ala Lys Leu Arg Arg Asp Val Asp Asn Gly Leu Ser Leu
1489 705 710 715 720
1491 Val Ile Phe Ser Asp Trp Tyr Asn Thr Ser Val Met Arg Lys Val Lys
1492 725 730 735
1494 Phe Tyr Asp Glu Asn Thr Arg Gln Trp Trp Met Pro Asp Thr Gly Gly
1495 740 745 750
1497 Ala Asn Ile Pro Ala Leu Asn Glu Leu Leu Ser Val Trp Asn Met Gly
1498 755 760 765
1500 Phe Ser Asp Gly Leu Tyr Glu Gly Glu Phe Thr Leu Ala Asn His Asp
1501 770 775 780
1503 Met Tyr Tyr Ala Ser Gly Cys Ser Ile Ala Lys Phe Pro Glu Asp Gly
1504 785 790 795 800
1506 Val Val Ile Thr Gln Thr Phe Lys Asp Gln Gly Leu Glu Val Leu Lys
1507 805 810 815
1509 Gln Glu Thr Ala Val Val Glu Asn Val Pro Ile Leu Gly Leu Tyr Gln
1510 820 825 830
1512 Ile Pro Ala Glu Gly Gly Gly Arg Ile Val Leu Tyr Gly Asp Ser Asn
1513 835 840 845
1515 Cys Leu Asp Asp Ser His Arg Gln Lys Asp Cys Phe Trp Leu Leu Asp
1516 850 855 860
1518 Ala Leu Leu Gln Tyr Thr Ser Tyr Gly Val Thr Pro Pro Ser Leu Ser
1519 865 870 875 880
1521 His Ser Gly Asn Arg Gln Arg Pro Pro Ser Gly Ala Gly Ser Val Thr
1522 885 890 895
1524 Pro Glu Arg Met Glu Gly Asn His Leu His Arg Tyr Ser Lys Val Leu
1525 900 905 910
1527 Glu Ala His Leu Gly Asp Pro Lys Pro Arg Pro Leu Pro Ala Cys Pro
1528 915 920 925
1530 Arg Leu Ser Trp Ala Lys Pro Gln Pro Leu Asn Glu Thr Ala Pro Ser
1531 930 935 940
1533 Asn Leu Trp Lys His Gln Lys Leu Leu Ser Ile Asp Leu Asp Lys Val
1534 945 950 955 960
1536 Val Leu Pro Asn Phe Arg Ser Asn Arg Pro Gln Val Arg Pro Leu Ser
1537 965 970 975
1539 Pro Gly Glu Ser Gly Ala Trp Asp Ile Pro Gly Gly Ile Met Pro Gly
1540 980 985 990
1542 Arg Tyr Asn Gln Glu Val Gly Gln Thr Ile Pro Val Phe Ala Phe Leu
1543 995 1000 1005
1545 Gly Ala Met Val Val Leu Ala Phe Phe Val Val Gln Ile Asn Lys Ala
1546 1010 1015 1020
1548 Lys Ser Arg Pro Lys Arg Arg Lys Pro Arg Val Lys Arg Pro Gln Leu
E--> 1549 1025/1025 1030 1035 1040
1551 Met Gln Gln Val His Pro Pro Lys Thr Pro Ser Val
1552 1045 1050

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VERIFICATION SUMMARY

DATE: 02/13/2002

PATENT APPLICATION: US/09/830,837

TIME: 10:05:15

Input Set : A:\EP.txt

Output Set: N:\CRF3\02132002\I830837.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application Number
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:525 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
L:1028 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4
L:1549 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:6
L:1586 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:1625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:1698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:1732 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:1771 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:1807 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:1846 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:1904 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:1926 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:1959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:2292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46
L:2315 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:47
L:2601 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74
L:2624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75
L:2647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76